Central Intelligence Agency

Washington, D.C. 20505

Sept 10 2012

Ms Melissa Toffel
Environmental Protection Agency Region 3
1605 Arch Street
Philadelphia PA 19103 2029

Reference Request for Underground Storage Tank Information—George Bush Center for Intelligence

Dear Ms Toffel
As a follow up to Michael Prescott s inspection on May 21 2012, you asked us to provide hard copy documentation regarding the cathodic protection of our underground storage tanks Here is a list of the materials this package contains

Tab 1 Scope of work and drawings for USTs #1 4 located at the Central Plant

- Size 50 000 gallons each
- Type of fuel diesel #2
- Type II double wall fiberglass coated (100 mil) steel (ACT 100)

Tab 2 Drawings for USTs #5 7 located at the Central Plant

- Size 50 000 gallons each
- Type of fuel diesel #2
- Double wall, 70 mils min urethane coated steel (ACT 100U) constructed per UL 58/UL 1746 Part IV/ACT100 U, Modern Welding Co

Tab 3 Equipment specification submittals and drawing for UST #11 located at the Transportation Support Center (aka motorpool)

- Size 6 000 gallons
- Type of fuel on road diesel
- Double wall fiberglass Model DWT 3 Type II(8) diesel brine, Owens Corning

Tab 4 Scope of work and drawing for USTs #11 and 12 located at the Transportation Support Center

- Tank #11 Size 6,000 gallons Type of fuel diesel (See above)
- Tank #12 Size 500 gallons Type of fuel used motor oil
- Double wall, fiberglass coated steel (ACT-100) Glasteel model by Modern Welding Co

Tab 5 Equipment specification submittals for UST #13 located at the Central Plant

- Size 560 gallons
- Type of fuel #2 diesel
- Double wall, Type II fiberglass clad steel Glasteel model by Modern Welding Co
- Purpose overflow tank for emergency generators
- Frequency of pump out approximately 300 gallons every two months

[Note The registration document on file at Virginia DEQ mistakenly lists the location of tank #13 as the motorpool]

No original installation documentation from 1989 is available for USTs #8 9 and 10 located at the Transportation Support Center A contractor is coming to GBCI soon to verify the material of construction and if relevant, the existing cathodic protection of those tanks Those results will be provided as soon as possible

I can be reached on (703) 874 2159 if you have additional questions

Sincerely

Virginia Orr
Chief, HQ Environmental Safety Staff

Atch
Tab 1 Documentation for USTs #1 4
Tab 2 Documentation for USTs #5 7
Tab 3 Documentation for UST #11
Tab 4 Documentation for USTs #11 and 12
Tab 5 Documentation for UST #13

Versar INC

SCOPE OF WORK (Continued)

To keep the facility in operation a minimum of two 50 000 gallon tanks must be in service at all times This requires the removal of 2 of the 5 existing tanks installation/operation of 3 of the new tanks removal of the remaining 3 existing tanks and then installation of the 4th new tank

WARNING

The Contractor shall be responsible for notifying Miss Utility for locating all underground utilities and will exercise care to protect these services during all construction activities

The Contractor shall be licensed in the State of Virginia for the work specified and comply with all regulations applicable to removal and disposal of existing tank(s) and installation of the new facilities

Because this project is to be accomplished at a sensitive governmental facility contractors shall observe those security measures required by the Central Intelligence Agency

The Contractor shall include in the base bid the handling of any water conditions that can be controlled by the use of a 2 inch pump

It shall be the Contractor's responsibility to secure all necessary licenses and permits and make proper notifications to all regulatory agencies Copies of all licenses and permits shall be provided to the site engineer prior to commencement of work

The filtration and transfer of up to 100 000 gallons of diesel product shall be included in the base bid

All required soil testing is to be accomplished by Versar The storage of any suspect contaminated soil or disposal of any soil verified as contaminated shall be provided as an alternative

A complete set of approved prints specifications building permits and updated as built drawings shall be maintained on location by the Contractor during the entire period of construction

SCOPE OF WORK (Continued)

The Contractor shall be responsible for furnishing all labor material and equipment for a complete turnkey installation

The Contractor shall be required to provide OSHA approved shoring for the excavations as mandated by the provisions of Federal Register Volume 54 dated October 31 1989 Section 1926 652 and subsequent updates and guidances Shoring design shall be certified by a Virginia State Registered Professional Engineer

The construction area shall be cordoned off by a 4 foot high construction fence and shall be protected by flashing barricades spaced no more than 8 feet apart

All concrete in the shelter pad area shall be removed Restoration of the areas outlined on the plans shall be included in the base bid Repairs to damaged property beyond these established limits shall be at the Contractor's expense

Dismantling of the existing tanks shall not be accomplished on the property of the Agency

Eight drawings are attached to these specifications and are made a part of the contract by reference All work is to be accomplished in accordance with U S Government specifications U S Government requirements manufacturer's recommendations and all regulations In the event of a conflict between the aforementioned the most stringent shall take precedence

DEMOLITION

Remove two bus stop shelters and transport to a secure storage area identified by the site engineer The Contractor shall be responsible for restoration of the bus stop area including re installation of the 2 shelters to their original condition after construction is complete Excavate clean remove and dispose of two 50 000 gallon steel underground diesel fuel storage tanks (existing tanks Nos 1 and 2) Remove the two vent risers and underground vent lines for these tanks Remove the remote fill containment pad and save the brass markers for reinstallation Flush all 5 fill lines

thoroughly and remove piping to the tanks Excavate product piping from tanks to building Cut flush to tanks and remove the fuel piping associated with existing tanks Nos 1 and 2

After the three new 50 000 gallon USTs have been installed and are in operation the Contractor shall remove existing tanks (#3 #4 and #5) the vent line containment pit piping and ancillary equipment When removal is complete the fourth tank shall be installed

The Contractor shall dispose of tanks and all residuals in accordance with API Publication 2015 API Recommended Practical 1604 and all State and Federal regulations The Contractor shall provide certification of proper disposal of tanks residues rinsates and other regulated substances

CONSTRUCTION Install two 50 000 gallon double wall fiberglass coated steel tanks (#2 and #3) in the existing hole Complete a new excavation for one additional tank (#1) and install a third tank beside the other two Before the tanks are set the existing anchor pad shall be cored to enable the site engineer to determine if it is suitable for reuse If adequate anchor two tanks to the existing underground anchor pad and pour a new pad for the third tank If not adequate pour a new 18 inch thick anchor pad on top of the existing for two tanks and a new pad for the third tank To cover the additional cost of a new anchor pad an alternate price is to be provided After tanks are secured backfill with pea gravel The Contractor shall carefully follow backfill procedures outlined in the drawings and specifications Run new piping for fills vents gauging risers and suction/return lines Connect to existing FOS and FOR lines at the inside wall of the building Existing lines at point of connection are to be suspended from the ceiling as shown in detail 2/6 of the plans so that no weight of the piping is borne by the termination fittings Slope of product lines shall conform to plan outlined in sheet 3 of the drawings (Topographic Profile Section) Install an 80 gallon drain tank inside the building to collect leakage from the secondary product piping of all suction and return lines After piping is complete new tanks Nos 1 2 and 3 shall be filled with 45 000 35 000 and 10 000 gallons of fuel respectively Then existing tanks Nos 3 4 and 5 shall be removed along with all existing piping Install fourth tank complete with associated piping Install four 4 inch slotted PVC observation wells as shown on the

SCOPE OF WORK (Continued)

drawings Before piping is backfilled the Contractor shall submit an as built drawing for approval It shall be submitted with sufficient lead time to permit site review before lines are covered

Construct a 58 foot x 64 foot x 9 inch thick concrete mat over the diesel tanks Elevate the pad 1 inch above surrounding grade and elevate all manholes within the mat 1 1/2 inches to divert water Brass identification markers shall be reinstalled at the fills observing the proper numbering sequence Each marker shall be depressed 1/4 inch below grade for protection Saw cut borders of all excavations within paved areas The bus stop area shall be restored as shown on detail 1/4 of the plans All curbing shall be replaced to match existing The excavation transiting the roadway shall be based in with 12 inches of 4 000 PSI concrete reinforced with No 4 rebar 12 inches OCEW and located in the center of the pour The concrete shall be coated with binder and topped with 2 inches of finish coat asphalt to meet the surrounding grade Pour 6 inches of concrete in border areas of tank mat in all ditches within the asphalt paved area and over old vacated tank excavation Coat concrete surfaces with binder and top with 1 1/2 inches of finish coat asphalt Seal blacktop with two coats of Jennite sealer and exposed concrete with two coats of Sure Cure sealant by Kaufman Products Inc Identify all tanks inside the spill containment fills as Diesel 50 000 gal with a Universal No 56 tag modified to reflect both product and gallonage Paint the fill lid and a 2 inch band surrounding the lid with yellow paint

Furnish and install electronic control system Model RLM 5001 with printer as produced by Red Jacket Electronics Sensors shall be installed to monitor inventory the tanks interstitial space piping sump and drain tank

Run one new 1 inch conduit from existing GAI Tronics intercom system to shelter area Mount unit on shelter exterior as shown on detail 2/4 of the plans Attach a 3 inch x 5 inch black Bakalite sign engraved with white lettering to read For Refueling Operations Only Run an additional 1 inch high voltage conduit and install a (120 V 60 HZ) duplex outlet 18 inches AFG on the shelter as shown Mount a weatherproof junction box on the shelter exterior adjacent to the intercom unit Run two 1 inch conduits to this

SCOPE OF WORK (Continued)

box One shall be a spare for future use only The second shall contain wiring from the red jacket control panel

Where excavations extend into grass areas rake in 3 inches of topsoil to finished grade and cover with sod Patch all breeches in the building structure with hydraulic cement and paint to match existing Mulch unpaved areas of the shelter island to match existing

Versar INC

TANK REMOVAL SPECIFICATIONS

The Contractor shall exercise all reasonable precautions to avoid damaging property surrounding the site No Smoking signs shall be posted The site shall be kept clean and free of debris all times If the Government s site engineer detects an unsafe condition within the work area he is required to stop all work until the unsafe condition is corrected The Contractor shall have a fire extinguisher (min rating of 20 B C) readily available on the site at all times during the entire construction period A complete set of approved prints and specifications and building permits shall be maintained on location by the Contractor during the entire period of construction

Before any tank is lifted out of the ground all lines shall be disconnected from the tank and those containing product shall be drained into a container No liquid shall be allowed to drain into the ground Product shall be mechanically hand pumped to a maximum allowable depth of 1/4 inch before removal The tanks shall then be inerted and cleaned The inspection plate shall be removed by the Contractor and turned over to the Government's site engineer Removal hauling from the site and disposal shall be accomplished by the Contractor in accordance with all regulatory requirements and API recommended practice bulletin 1604 2015 and 2202 The tank and all residues shall be disposed of in a location preapproved by the Government

Before removal from the premises the Contractor shall stencil the following on both ends of all tanks

TANK HAS CONTAINED A FLAMMABLE LIQUID NOT VAPOR FREE
NOT SUITABLE FOR STORAGE OF FOOD OR LIQUID INTENDED FOR
HUMAN OR ANIMAL CONSUMPTION

REMOVAL DATE

All dirt shall be stockpiled on plastic and covered To prevent possible soil migration the joints of 6 mil polyethylene plastic sheets shall include a minimum 6-inch overlap sealed with 3 inch wide duct tape on both sides For bidding purposes the proposal is to be based upon the assumption that there is no contaminated soil at the site

Written documentation of disposal of the five tanks tank residuals clean soil and all construction debris shall be provided to the Government

Versar INC

NOTES FOR UNDERGROUND STORAGE TANK INSTALLATION

A Anchor Pad After elevation and thickness of the existing anchor pad is established the site engineer will determine if it is adequate Any new pad shall be poured to these specifications if required At a minimum the pad will be the same length as the tank but will extend 2 feet beyond the edge of the tank on either side Concrete shall be 3 000 PSI and reinforced with No 5 rebar 12 inches OCEW and No 8 rebar at all anchor points Concrete must age minimum of 2 days before setting of tank The anchor pad shall be a minimum thickness of 18 inches All new concrete shall be poured on a base having a minimum compaction of 98 percent and at a 3 inch slump

The anchor straps shall be specific to the new tanks and shall be supplied by the tank manufacturer The supplemental holddown systems for all tanks shall be equipped with 1 1/4 inch turnbuckles There shall be two turnbuckles per strap

Each anchor point shall be rated to withstand the buoyant force of a minimum of 20 000 pounds

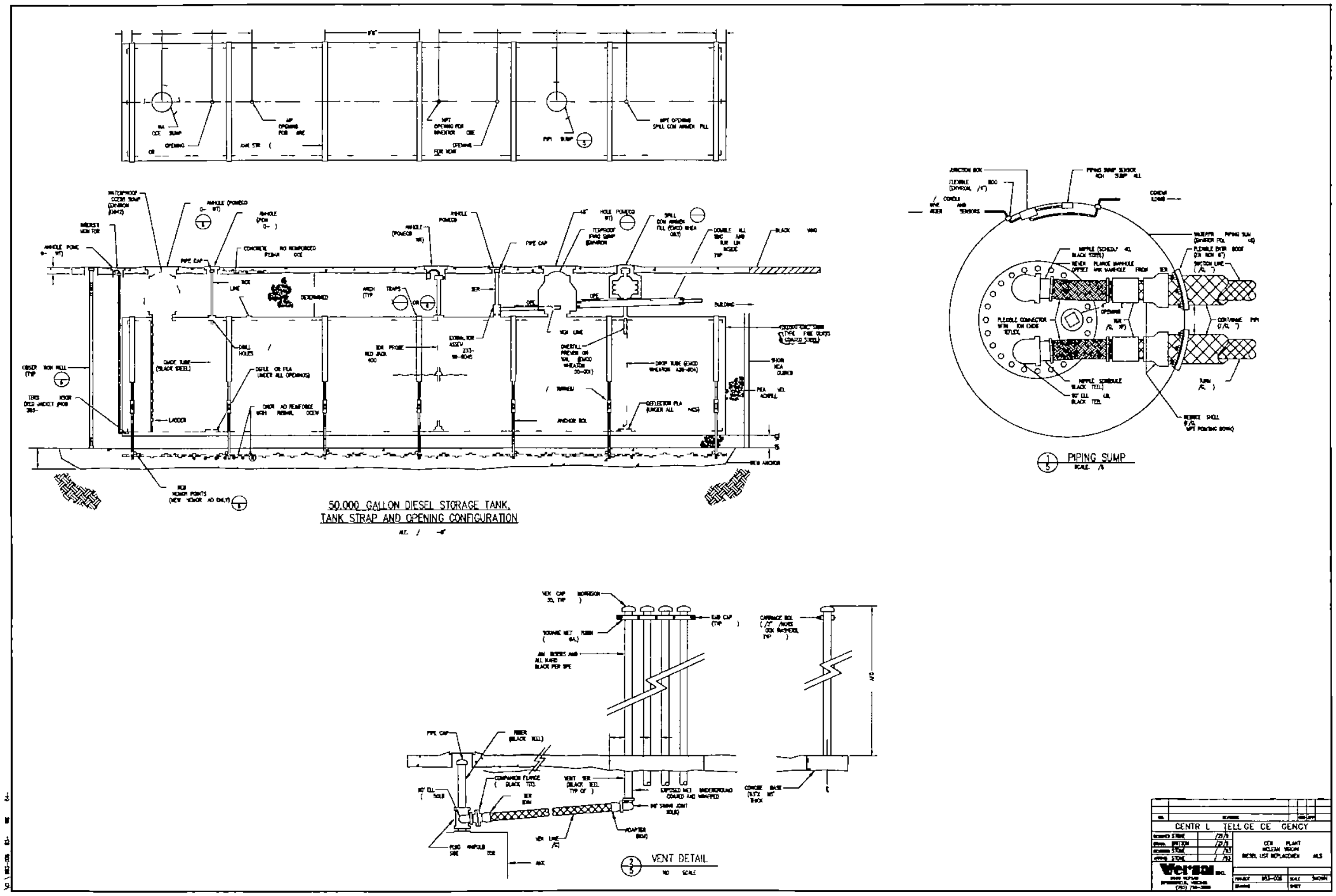
All hardware shall be coated with two coats of Bitumastic paint No 50 as manufactured by Kopper s Co Inc or approved equal

B Fuel Storage Tanks Four (4) Type II double wall fiberglass coated (100 mil) steel storage tanks with two manways ladders deflector plates under all openings and all anchoring hardware are to be furnished by the Contractor Acceptable manufacturers are Adamson Co Inc General Industries Inc Modern Welding Co Inc or approved equal

Identification markers Universal No 56 or approved equal shall be installed on the fill of each storage tank to properly identify its intended contents The markers shall also be modified to indicate gallonage The fill manholes shall be painted yellow using the standard API color identification system as indicated on API 1637 dated October 1986 The color used to identify each manhole shall be applied in a 2 inch band around the manhole

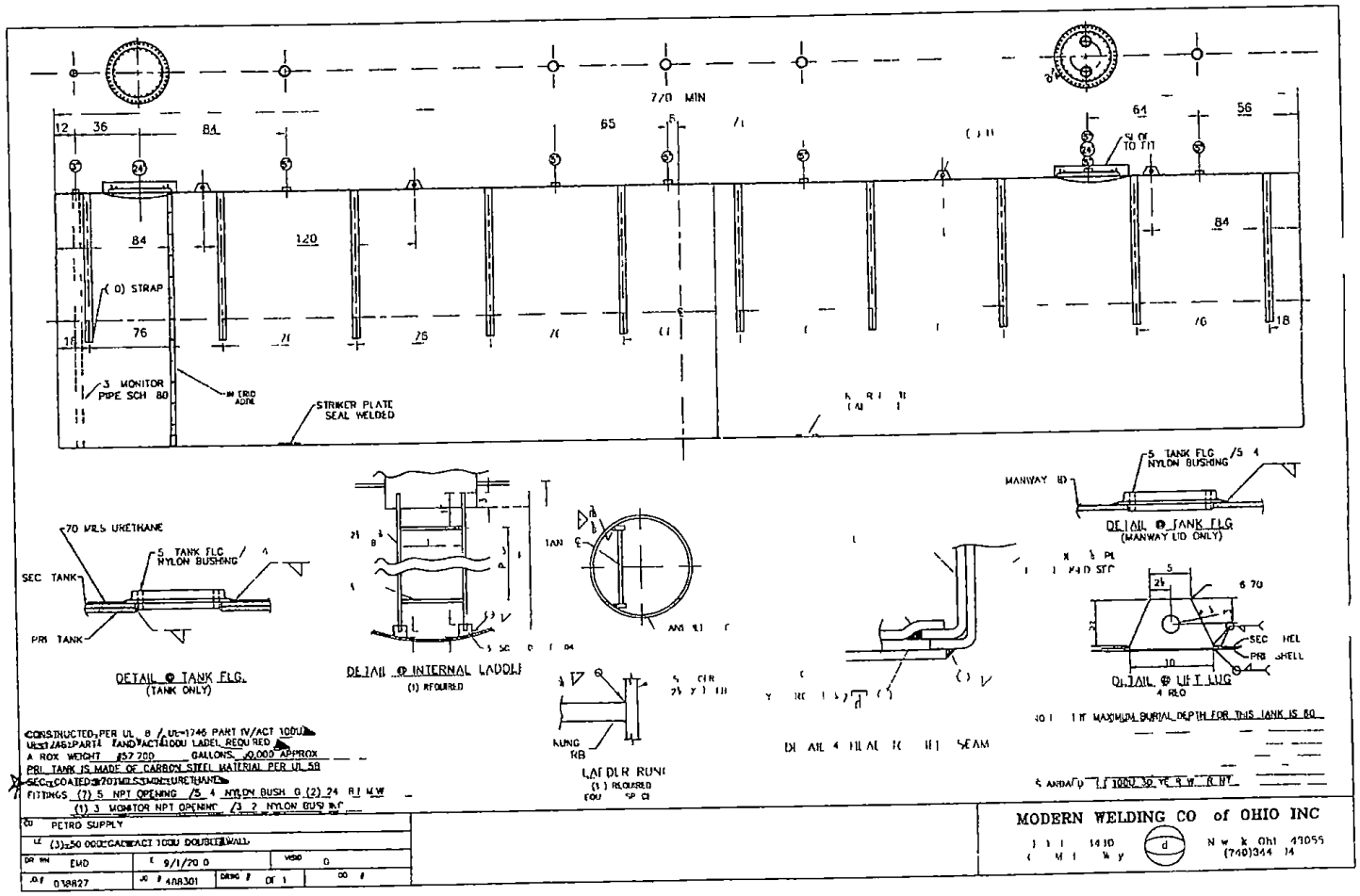
When lifting or moving the tanks the Contractor shall use properly sized equipment and lift by lifting lug(s) Never roll or use cables or chains around any tank Set on a smooth clean surface free of rocks and other foreign objects (exception tank can be rolled up to 90 degrees on a smooth clean surface when performing the pre installation pressure and soap test) Tanks are to be chocked using manufacturer s recommendations until

USIS #1-4

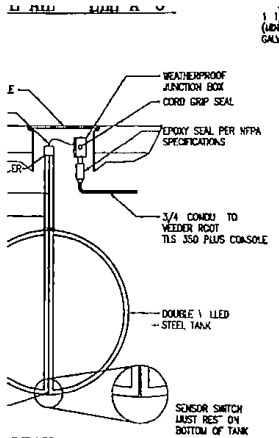

50,000 GALLON DIESEL STORAGE TANK,
TANK STRAP AND OPENING CONFIGURATION
PIPING SUMP
VENT DETAIL
NO SCALE

USTs # 5-7 50k gal diesel #2

50K USTs #5-7

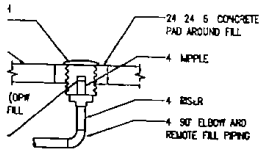


USTs # 5-7



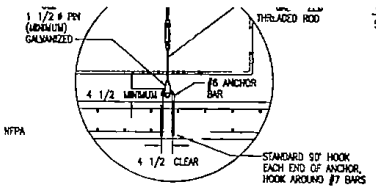
LEAK SENSOR

NE



MOTE FILL ASSEMBLY

E. NONE



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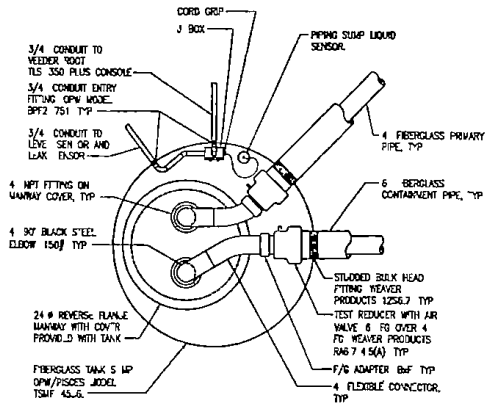
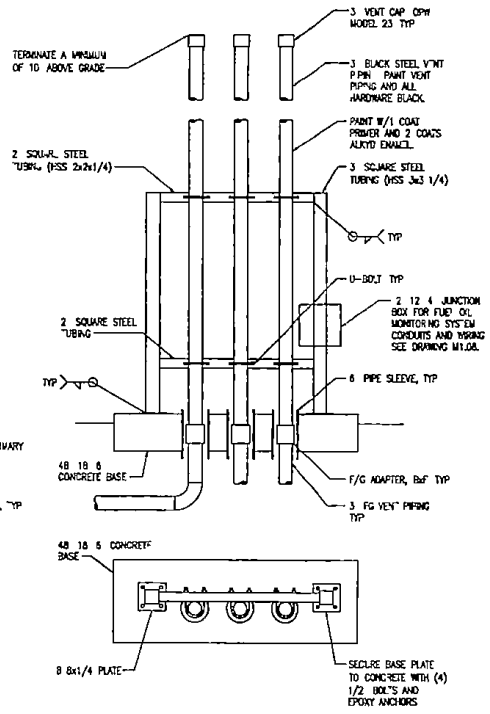


FUEL OIL SUPPLY AND RETURN PIPING

SCALE: NON



VENT TERMINATION DETAIL

SCALE: NONE

CENTRAL PLANT / GENERATOR UPGRADE CONTRACTOR PACKAGE

DETAILS

DATE: 23 April 2010

JBA PROJECT NO: 5397.00

SS PROJECT NO.: HQS 200610646

SCALE: AS SHOWN

DRAWN BY: KTD

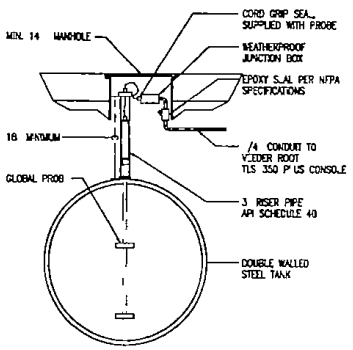
CHECKED BY: PNH

APPROVED BY: KTD

DRAWING NO. BOX: M4.01

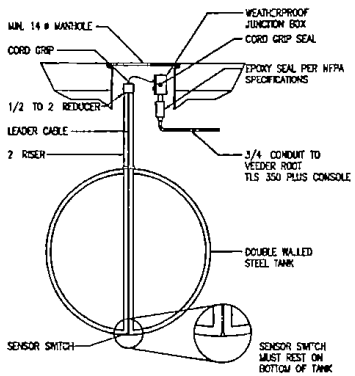
CONTRACTOR BID PACKAGE 04/23/10

SCALE. NONE



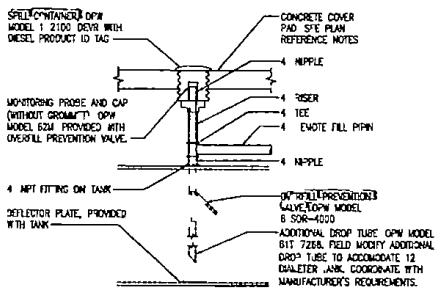
TANK LEVEL SENSOR

SCALE. NONE



TANK LEAK SENSOR

SCALE. NONE



OVERFILL PREVENTION VALVE

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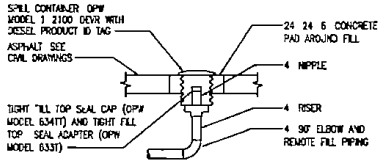
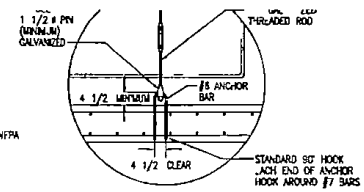


REMOTE FILL ASSEMBLY

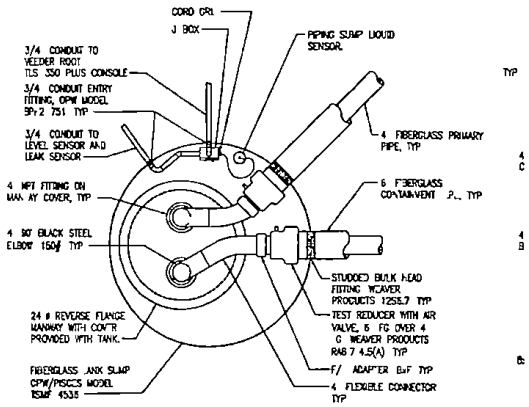
SCALE. NONE



SCALE. NONE

TERMINATE OF 10 ABO

2 SQUARE TUBIN HS



FUEL OIL SUPPLY AND RETURN PIPING

SCAL NON

UST #11 6k gal
on road diesel

Tri County Industries

(301) 937 8611
1-800 336 8611
Fax # 937 9028
FID 52-1340142

5005 Powder Mill Road
P O Box 1467
Beltsville, MD 20704-1467

Underground Storage Tank Replacement
MotorPool Garage
Langley Compound, Virginia
Contract # WA92193TCI

EQUIPMENT SPECIFICATION SUBMITTALS

✓6,000 gallon standard DWT-3 Type II(8) diesel brine O/C underground storage tank with 42 diameter sealed turbine enclosure Model STE42B-3

CONTRACTOR
TRI COUNTY INDUSTRIES, INC

✓ Approved

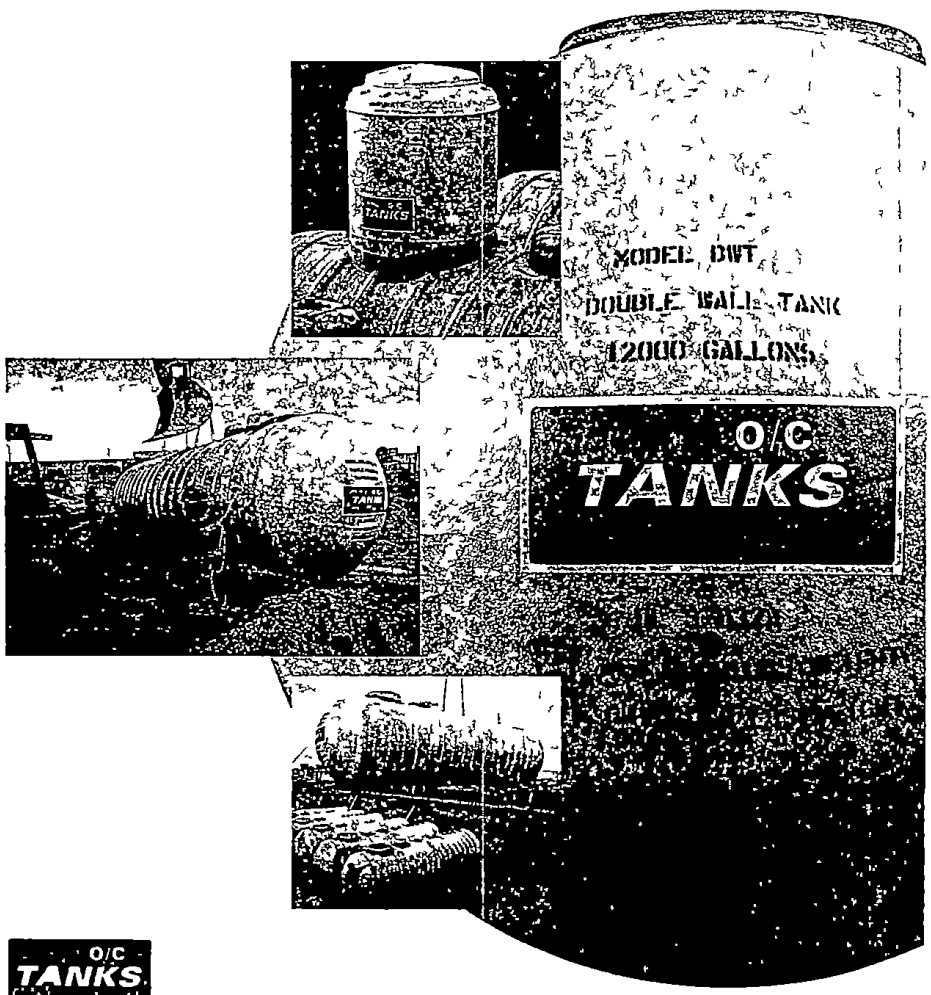
___ Approved with corrections as noted on submittal data and/or attached sheet s)

Signature Saul Brasey
Title: Pro. Mgr
Date 7-23-93

ENGINEERING
DOCUMENT REVIEW

Check only one item
☐ REVISE & RESUBMIT
☐ RESOLVE COMMENTS & PROCEED
☐ PROCEED
☒ ACCEPTED
ENGINEER Mark J. Peeler DATE 26 AUG 93

Double-Wall Fiberglas® Tanks for Underground Petroleum Storage



O/C TANKS

#2

Tri County Industries

(301) 937 8611
1-800 336-8611
Fax # 937-9028
FID 52-1340142

5005 Powder Mill Road
P O Box 1467
Beltsville, MD 20704-1467

Underground Storage Tank Replacement
MotorPool Garage
Langley Compound, Virginia
Contract # WA92193TCI

EQUIPMENT SPECIFICATION SUBMITTALS

✓ Total Containment S838331 cuffed sump with environ flexible entry boots

CONTRACTOR
TRI COUNTY INDUSTRIES, INC

✓ Approved

____ Approved with corrections as noted on submittal data and/or attached shee (s).

Signature Saul Bussy

Title Proj Mgr

Date 7-23-93

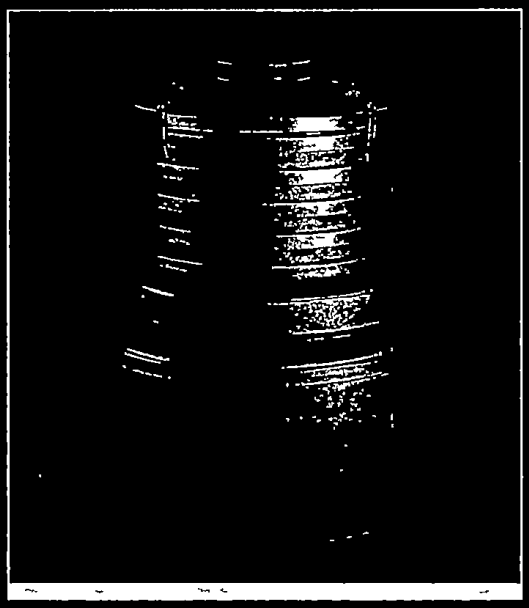
ENGINEERING
DOCUMENT REVIEW

Check only one item
☐ REVISE & RESUBMIT
☐ RESOLVE COMMENTS & PROCEED
☐ PROCEED
☒ ACCEPTED
ENGINEER Frank Burke DATE 26AUG93

TOTAL CONTAINMENT INC

...the industry's first choice for secondary containment.

SUMP/RISERS



...Watertight chambers engineered to provide secondary containment for submersible pumps, manways and fittings.

#2

Tri County Industries

(301) 937-8611
1-800 336 8611
Fax # 937-9028
FID 52-1340142

5005 Powder Mill Road
P O Box 1467
Beltsville, MD 20704-1467

Underground Storage Tank Replacement
MotorPool Garage
Langley Compound, Virginia
Contract # WA92193TCI

EQUIPMENT SPECIFICATION SUBMITTALS

✓ Fairfield 360WT Manhole

✓ OPW 53VML-0160 Ball Float Valve Assembly

✓ OPW 1-4000 Spill Container with 1DK-4080 Pull Drain

CONTRACTOR
TRI COUNTY INDUSTRIES, INC

✓ Approved

____ Approved with corrections as noted on submittal data and/or attached sheet(s)

Signature Saul Bussy

Title Proj Mgr

Date 7-23-93

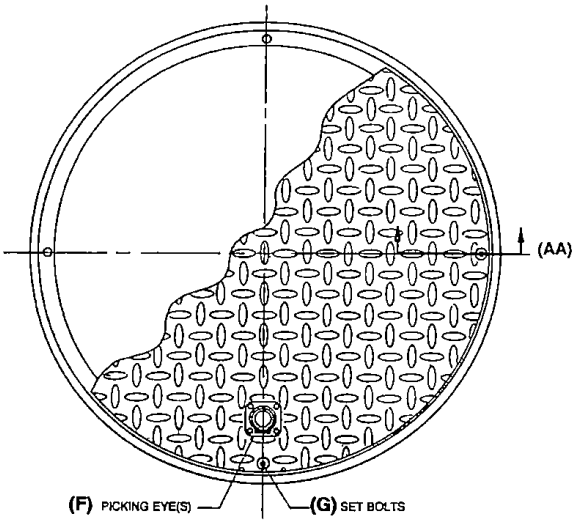
ENGINEERING
DOCUMENT REVIEW

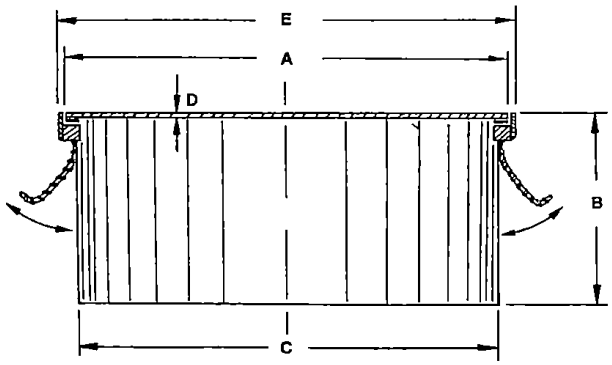
Check only one item
☐ REVISE & RESUBMIT
☐ RESOLVE COMMENTS & PROCEED
☐ PROCEED
☒ ACCEPTED
ENGINEER [signature] DATE 26AUG93

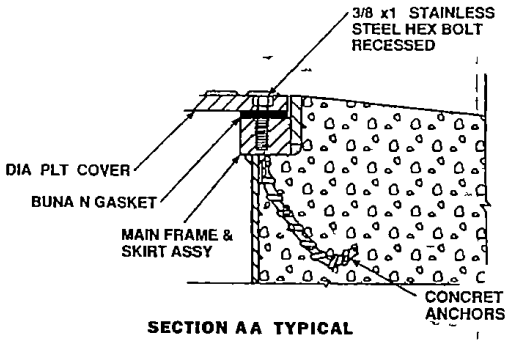
WT SERIES

HEAVY DUTY WATER TIGHT MANHOLES

300WT 420WT
360WT 480WT







SECTION AA TYPICAL

SOLID COVER HEAVY DUTY MANHOLES							
Model	A	B	C	D	E	F	G
180 WT	18½	12	18¼	⅞	19¾	0	2
300 WT	29¾	13½	28¾	3/8	30¾	1	4
360 WT	35¾	13½	35	1/2	36½	1	4
420 WT	41¾	13½	41½	1/2	43	2	4
480 WT	48	13½	46½	1/2	49	2	6

STANDARD FEATURES

- Reinforced diamond plate steel covers with H 20 truckload rating
- ⅛" BUNA N Gasket & stainless steel set bolts
- 14 Gauge Skirts
- Recessed water tight picking eye(s) for easy cover removal
- #4 rebar anchors welded to frame Bars bend out during installation for anchoring in concrete
- Complete welded steel construction
- All steel coated with rust preventive paint
- Optional internal access ports available see our dual and triple access series manholes

NOTE 180 WT is the same as MW Series without monitor well designations

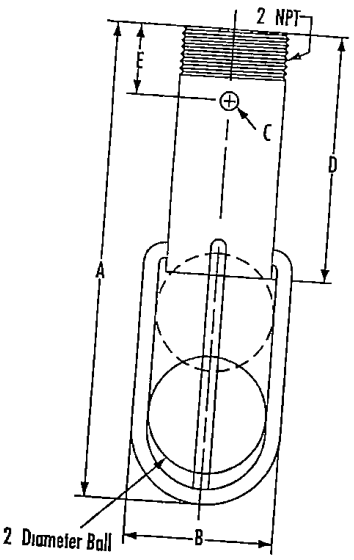
FAIRFIELD INDUSTRIES, INC
1275 BLOOMFIELD AVENUE BLDG #10 FAIRFIELD NJ 07004
201 227 5321 FAX 201 227 7650

MEMBER PEI

DISTRIBUTED BY

Rev 10/1/92

OPW 53V BALL FLOAT VENT VALVES



Ordering Specifications and Dimensions

Product No	A in	A mm	B in	B mm	C in	C mm	D in	D mm	E in	E mm	lbs	kg	Description
53VM 0060	10 13/16	275	3	76	1/16	1 6	6 1/4	157	1 1/2	38	2	9	Used to slow down the flow of liquid into the storage tank Provide an overfill warning to the operator
53VML 0120	16 11/16	424	3	76	1/8	3 2	12	305	1 1/2	38	4	1 8	For use with double wall tanks
* 53VML 0160	20 11/16	526	3	76	1/8	3 2	16	407	1 1/2	38	5	2 3	For use with 8 dia fiberglass & steel tanks, double wall
* 53VML 0180	22 1/16	576	3	76	1/8	3 2	18	457	1 1/2	38	6	2 7	For use with 8 dia fiberglass & steel tanks, double wall
* 53VML 0210	25 11/16	653	3	76	1/8	3 2	21	534	1 1/2	38	7	3 1	For use with 8 dia. fiberglass & steel tanks double or single wall with manway no extension
53VML 0230	27 11/16	703	3	76	1/8	3 2	23	584	1 1/2	38	8	3 6	
53VSS-0065	9 13/16	249	3	76	1/8	3 2	5 1/4	130	1 1/2	38	2	9	Used to minimize product mixing when vent lines are manifolded underground
53VTS 0070	9 13/16	249	3	76	1/16	1 6	5 1/4	130	1 1/2	38	2	9	Similar to 53VSS except vent bleed hole is only 1/16
53FC 0046	7 23/32	199	3	76	N/A		3 3/32	80	N/A		1	5	Used only on vapor return line has no bleed hole

*Designed to meet the 90% requirement established by EPA for flow restriction and overfill warning
Determine the length required for your specific UST application with the information on the previous page

OPW 1 THREAD-ON SPILL CONTAINERS

The OPW 1 Spill Container Series is designed to prevent petroleum product from entering the soil near the fill or vapor connection on underground storage tanks Frequently during normal tank filling operations or in the event of tank overfill small amounts of petroleum product can be spilled upon the disconnect of the delivery fitting The OPW 1 Spill Container catches this spillage and helps prevent groundwater pollution

The OPW 1 4000 represents the standard for quality in spill container technology and the 5 gallon models are CARB certified per executive order G 70 52AN Now the complete OPW 1 Spill Container Series offers you a selection of features that allow you to select the model that meets your application

Container Capacity

The OPW 1 Spill Container Series is available in either the original 3 6 gallon capacity or a new, true 5 gallon capacity For those customers and locations requiring 5 gallon capacity you can now meet those needs with OPW 1 technology

Drain Valve

Two drain valve options are also available–the original push to open plunger drain valve or the new lever actuated pull to open drain valve Both valves provide high speed draining The drain valve poppets open *downward* against tank test pressure so either valve can remain in the spill container during tank testing

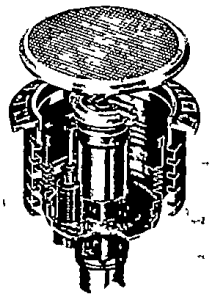
The new pull to-open drain valve actuator lever sits low—only 3 78 above the spill container bottom, to reduce possible damage by delivery elbows during product drops The drain valve chain attaches to the upper clamp to allow easy accessibility from the top of the spill container

1DK-4080 Drain Valve Kit

A separate pull to open drain valve kit is also available This kit contains all the parts necessary to replace a push to-open plunger drain valve with the new lever actuated pull to open drain valve

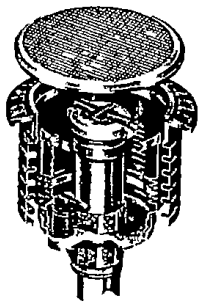
OPW 1 4000

3 6 gallon capacity with original push to open drain valve



OPW 1-4580

True 5 gallon capacity with new pull to-open drain valve



OPW
DOVER RESOURCES COMPANY

PO Box 405003 ◆ Cincinnati, Ohio 45240 5003 ◆ Telephone (513) 870-3219 ◆ (800) 422 2525 ◆ Fax (860) 421 3297

9/92

EP 21.0-

OPW 1 THREAD-ON SPILL CONTAINERS

The OPW 1 Spill Container Series is designed to meet the needs of those who specify purchase install and use spill containers in petroleum marketing applications

Easy to Specify and Order

The OPW 1 is supplied complete with your selection of drain valve In non-drain applications simply remove the valve and replace with a 1¼ NPT pipe plug supplied with the unit. Simply use a reducing bushing to adapt to 3 riser pipes

Easy to Install

Reduces jobsite time and installation costs Simply cut to length and thread a 4 riser pipe The OPW 1 screws direct ly onto the riser There are no external connections to make Adjust to final grade height and support the unit with backfill

Cover

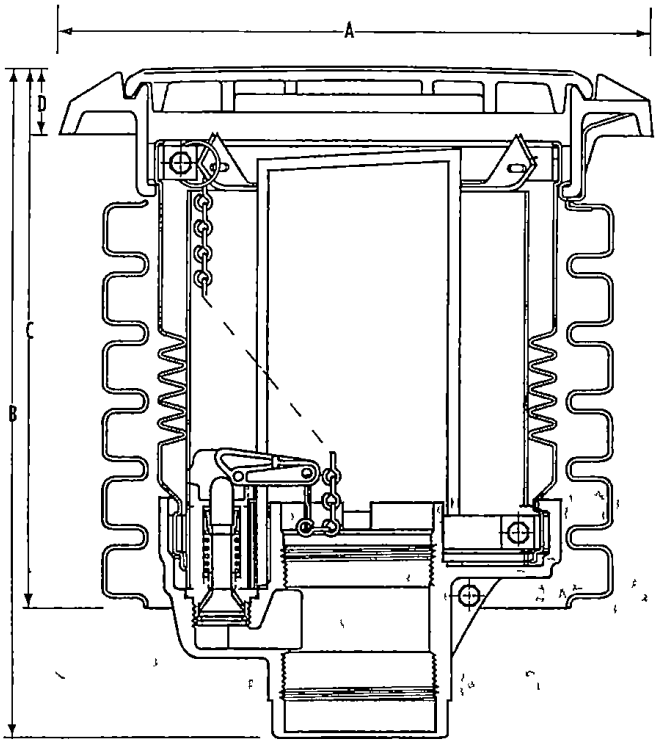
The cast aluminum cover is strong yet lightweight and easy to remove Both the cast aluminum and the cast iron covers now feature extended edges to reduce water entry into the spill con tainer

Simple to Use and Maintain

The push to open plunger and lever actuated pull to open high capacity drain valves speed container draining for operator convenience Both have a removable screen for easy cleaning The Duratuff® II lower body provides conductivity to the tank and will not corrode to the riser pipe making it easy to remove If soil testing is desired the removable bellows and lower body combine to give easy access to the backfill through the spill container—without breaking concrete

Materials

Cover sand cast aluminum or cast iron
Body ring cast iron Duragard® coated
Bellows low density polyethylene
Gravel guard high density polyethylene
Lower body Duratuff® II
Drain valve acetal polypropylene
Clamps stainless steel
Seals Buna N



Ordering Specifications

Product No	Gal	Liters	Drain Valve	Cover
1-4000	36	136	push	aluminum
1C-4000	36	136	push	cast iron
1-4500	50	189	push	aluminum
1C-4500	50	189	push	cast iron
1 4080	36	136	pull	aluminum
1C 4080	36	136	pull	cast iron
1 4580	50	189	pull	aluminum
1C 4580	50	189	pull	cast iron

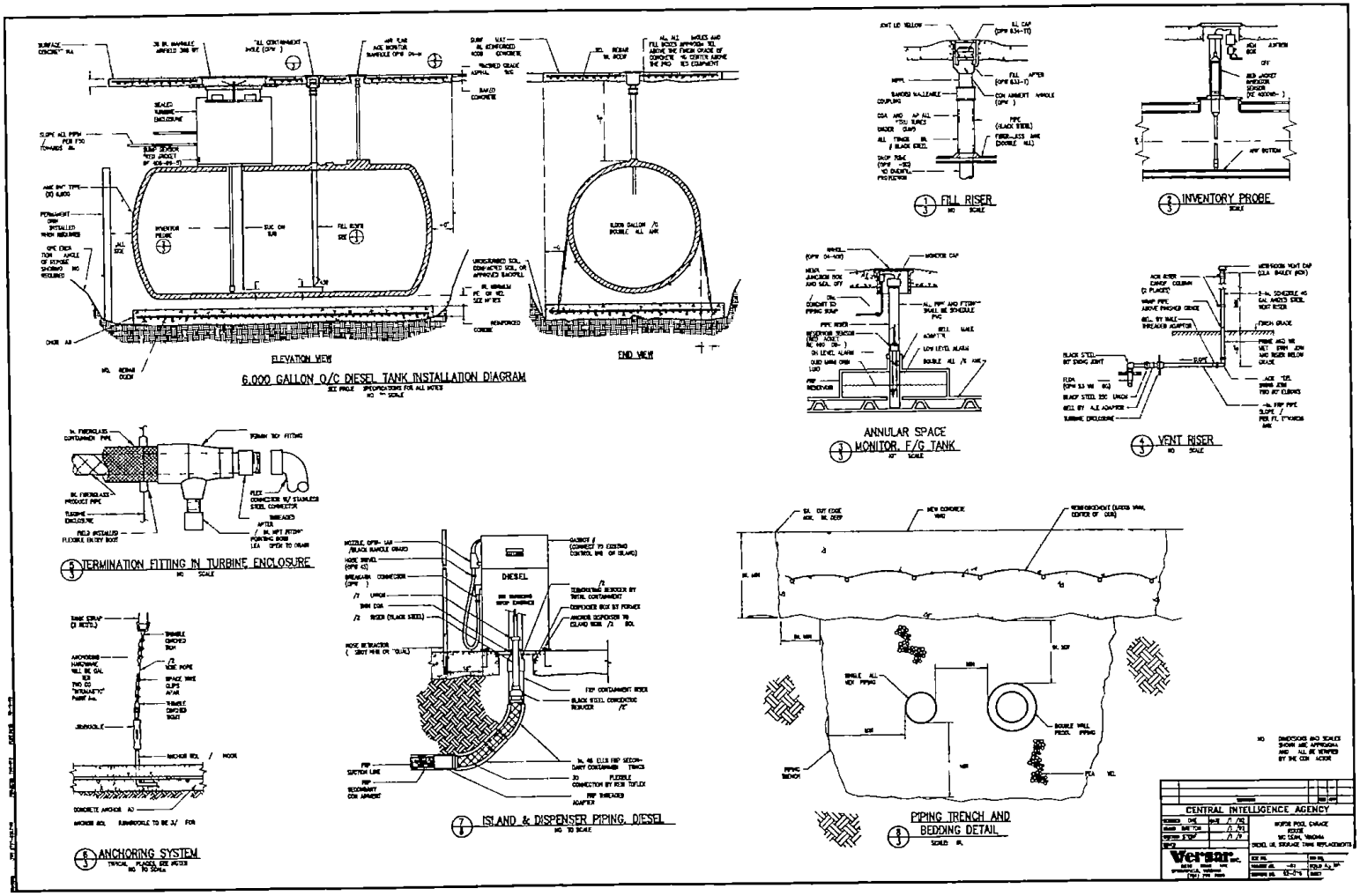
Kits	Description
1DK 4080	Kit to install a pull to open drain valve

Dimensions

	1 4000		1-4500	
	in	mm	in	mm
A	17	432	17	432
B	16¾	416	18¾	467
C	15¾	397	17⅝	448
D	1¾	48	1¾	48

IMPORTANT OPW products should be used in compliance with applicable federal state and local laws and regulations Product selection should be based on physical specifications and limitations and compatibil ity with the environment and material to be handled OPW MAKES NO WARRANTY OF FITNESS FOR A PARTICULAR USE. All illustrations and specifica tions in this literature are based on the latest product information available at the time of publication Dover/ OPW reserves the right to make changes at any time in prices materials specifications and models and to dis continue models without notice or obligation

UST #11


ELEVATION VIEW
END VIEW
6,000 GALLON D/C DIESEL TANK INSTALLATION DIAGRAM
1/3 FILL RISER
2/3 INVENTORY PROBE
3/3 ANNULAR SPACE MONITOR, F/G TANK
4/3 VENT RISER
5/3 TERMINATION FITTING IN TURBINE ENCLOSURE
6/3 ANCHORING SYSTEM
7/3 ISLAND & DISPENSER PIPING, DIESEL
8/3 PIPING TRENCH AND BEDDING DETAIL
DIESEL
CENTRAL INTELLIGENCE AGENCY
Versar

UST #12 Used oil
and
UST # 11 6k gal diesel

7'

Versar INC

Date October 19 1992

CENTRAL INTELLIGENCE AGENCY
MOTOR POOL GARAGE
ROUTE 123
MCLEAN, VIRGINIA

SCOPE OF WORK

GENERAL All work shall be performed in accordance with Versar Motor Pool drawings dated October 15 1992 sheets 1 through 4 Specifications dated October 19 1992 any addenda issued Government s requirements all federal state and local regulations and manufacturers recommendations

The Contractor shall furnish all equipment and supply items as specified or approved equal

WARNING The Contractor shall be responsible for locating all underground utilities and will exercise care to protect these services during all construction activities

The Contractor shall be licensed in State for the work specified and comply with all regulations applicable to removal and disposal of existing tank(s) and installation of the new facilities

DEMOLITION

Excavate for remove and dispose of one 850 gallon steel waste oil and one 6 000 gallon steel diesel fuel storage tanks Remove vent risers at building and flush lines thoroughly Plug vents underground at building and cut lines at edge of tank excavation Plug ends with hydraulic cement Repair roof at former waste oil vent penetration Remove all other associated piping and diesel fuel pump Remove the existing Red Jacket electronic monitoring panel Contractor shall dispose of tanks and all product residuals in accordance with API Publication 2015 API Recommended Practice 1604 and all State and Federal regulations He shall provide certification of proper tank disposal and disposal manifests for product residuals

The Contractor shall provide whatever sloping or shoring of excavations is required to protect personnel and property as mandated by the provisions of Federal Register Volume 54 dated October 31 1989

CONSTRUCTION

In the same tank excavations install one Owens Corning double wall fiberglass 6 000 gallon diesel storage tank Model Number DWT Type II 8 6 000 with factory installed brine in the interstitial space and one Modern Welding double wall fiberglass coated steel 550 gallon waste oil tank Glasteel Model Install two 4 in PVC observation wells in alternating corners of each tank hole Before lines are

SCOPE OF WORK (Continued)

backfilled the Contractor shall submit an as built drawing for approval It shall be submitted with sufficient lead time to permit site review before lines are covered Contractor to furnish 5 gallons of brine to Owner in a sealed and properly labeled container Tanks are to be labeled Diesel 6 000 Gallons and "Waste Oil 550 Gallons Install piping conduit and appurtenance in accordance with the contract documents

Construct an 18 foot x 30 foot concrete mat over the diesel tank and an 8 foot x 10 foot mat over the waste oil tank

Furnish and set one Gasboy Pump (No 9152CF) for diesel Properly identify as Diesel' along with No Smoking decal Install an 18 foot hose swivel (OPW 45) hose retractor (Gasboy Over Head HHR or approved equal), breakaway connector (OPW66 0075), and automatic nozzle (OPW 11 AK) with hold open rack Repaint the island form with one coat of PPG Speedhide Exterior Enamel 6 250 Relocate the existing towel dispenser and attach the new vent riser to the canopy column

Furnish and install electronic control system Model RLM 5001 as produced by Red Jacket Electronics Diesel inventory control shall be accomplished using the Red Jacket No RE400 098 5 sensing probe A hydrostatic interstitial space monitoring system shall be used on the diesel tank employing the Red Jacket sensor No RE400 109 5 in conjunction with the Red Jacket piping sump sensor part No RE400 069 5

Gauging of the waste oil tank shall be accomplished using the Hersey Junior Model gauge The Red Jacket RE400 180 5 will be installed in the interstitial space and the RE400 069 5 in the piping sump The Red Jacket control panel shall be located in the Motor Pool Office Connect electronic monitoring equipment of existing three gasoline tanks to the new Red Jacket control panel The existing power panel located in the Mechanical Room shall be used to satisfy all electrical requirements Install and mark dedicated circuit breakers as noted on the drawings Install an in line surge protector to safeguard the electrical monitoring system

Saw cut all ditches pump island voids, and around all new concrete mats then pave to match existing in accordance with the attached concrete/bituminous paving specifications

Versar INC

TANK REMOVAL SPECIFICATIONS

The Contractor shall exercise all reasonable precautions to avoid damaging the utilities paving, shrubbery foundations or other building structures "No Smoking" signs shall be posted The site shall be kept clean and free of debris all times If the Government's site engineer detects an unsafe condition within the work area he is required to stop all work until the unsafe condition is corrected The Contractor shall have a fire extinguisher (min rating of 20 B C) readily available on the site at all times during the entire construction period A complete set of approved prints and specifications and building permits shall be maintained on location by the Contractor during the entire period of construction

Before any tank is lifted out of the ground all lines shall be disconnected from the tank and those containing product shall be drained into a container No liquid shall be allowed to drain into the ground Any piping or conduit shall be removed as close as possible to the building without damaging the structure and sealed with Thorobond specified Product shall be mechanically hand pumped to a maximum allowable depth of 1/4 inch before removal The tanks shall then be inserted and cleaned The inspection plate shall be removed by the Contractor and turned over to the Government s site engineer Removal hauling from the site and disposal shall be accomplished by the Contractor in accordance with all regulatory requirements and API recommended practice bulletin 1604 2015 and 2202 The tank shall be disposed of in a location preapproved by the Government

All dirt shall be stockpiled on plastic and covered To prevent possible soil migration the joints of 6 mil polyethylene plastic sheets shall include a minimum 6 inch overlap sealed with 3 inch wide duct tape on both sides For bidding purposes the proposal is to be based upon the assumption that there is no contaminated soil at the site

Before removal from the premises the Contractor shall stencil the following on the end of the tank

TANK HAS CONTAINED A FLAMMABLE LIQUID NOT VAPOR FREE
NOT SUITABLE FOR STORAGE OF FOOD OR LIQUID INTENDED FOR
HUMAN OR ANIMAL CONSUMPTION

REMOVAL DATE

Written documentation of disposal of the tanks tank residuals clean soil and all construction debris shall be provided to the Government

Versar INC

October 19 1992

NOTES FOR UNDERGROUND STORAGE TANK INSTALLATION

A Anchor Pad At a minimum the pad will be the same length as the tank but will extend 2 feet beyond the edge of the tank on either side Concrete shall be 3 000 PSI and reinforced with No 4 rebar 12 inches OCEW and No 6 rebar at all anchor points Concrete must age minimum of 2 days before setting of tank The anchor pad shall be a minimum thickness 8 inches for the 550 gallon tank and 12 inches for the 6 000 gallon tank All concrete will be poured on a base having a minimum compaction of 98 percent and at a 3 inch slump

The anchor straps shall be specific to the new tanks and shall be supplied by the tank manufacturer The supplemental holddown systems for both tanks shall be equipped with ¾ inch turnbuckles There shall be two turnbuckles per strap

Tank Diameter	Buoyancy Load Rating
4-feet	4 200 pounds
8 feet	25 000 pounds

The wire rope for the supplemental holddown system shall be a minimum ½ inch improved plow steel rated for 20,000 pounds safe loading Short bends in the wire rope shall be reinforced with thimbles A minimum of 3 Crosby cable clamps or equivalent shall be used for each clamped section The U Bolt of the clamp shall be on the deadend of the wire rope and the safety clips spaced approximately 4 inches apart Anchor points for both tanks shall be rated to withstand the buoyant force of the tanks per Owens Corning publication No 5 PE 14638 (latest edition)

The Contractor shall be responsible for ensuring that at a minimum the anchoring system is per Owens Corning specifications If anchor points to deadman or anchor pads are formed using rebar cast in place the size and construction shall meet or exceed Owens Corning recommendations in publication No 3 PE 6304-Q (latest edition)

All hardware and wire rope shall be coated with two coats of Bitumastic paint No 50 as manufactured by Kopper s Co , Inc or approved equal Wire rope looped around deadman anchors shall receive 2 coats Bitumastic paint No 50 prior to installation

B Diesel Tank A double wall methanol resistant underground fiberglass storage tank (DWT Type II), turbine enclosure (sealed Model STE 42) and straps shall be furnished by the Contractor Tank turbine enclosure and straps are all to be manufactured by O/C Tanks Corporation The turbine enclosure top shall be constructed of fiberglass Piping penetrations through the turbine enclosure shall be accomplished using the Environ Flexible Entry Boots The use of HDPE turbine enclosure tops is prohibited

Versar INC

NOTES FOR UNDERGROUND STORAGE TANK INSTALLATION

Waste Oil Tank A double wall fiberglass coated steel storage tank (Glasteel by Modern Welding) with inverted flauge manway piping sump (Total Containment No 3833-1) and straps are to be furnished by the Contractor Piping penetrations shall be made using the Environ Flexible Entry Boots

When lifting or moving the tanks the Contractor shall use properly sized equipment and lift by lifting lug(s) Never roll or use cables or chains around either tank Set on a smooth clean surface free of rocks and other foreign objects (exception tank can be rolled up to 90 degrees on a smooth clean surface when performing the pre installation pressure and soap test) Tanks are to be chocked using manufacturer's recommendations until ready for installation If windy conditions exist or are expected anchor tanks using minimum ½ inch nylon or hemp rope over each tank and secure to stakes of adequate size to prevent movement of the tanks Manufacturer s recommended procedures must be carefully followed during installation Tank is to be set level An identification marker Universal No 56 or approved equal shall be installed on the fill of each storage tank to properly identify its intended contents as diesel and waste oil The marker shall also be modified to indicate gallonage The fill manholes will be painted using the standard API color identification system as indicated on API 1637 dated October 1986 The color used to identify each manhole shall be applied in a 2 inch band around the manhole

C Venting The vent risers shall extend a minimum of 12 feet above finished grade If a vent header falls within 4 feet of the roof parapet extend the vent 4 feet above the roof Vent risers stand off brackets and bolts shall be galvanized except where aesthetics are a consideration in which case black iron vent risers and hardware shall be primed with one coat of PPG Speedhide Inhibitive Primer 6 203 and two coats of PPG Speedhide Exterior Enamel 6 250 to match the building The stand off brackets and hardware shall be designed for 2 inch Schedule 40 steel pipe Installation of galvanized or black iron vent risers will be site specific A 2 inch ball valve shall be installed on the diesel vent line only Both risers shall be capped with a mushroom type vent header (Clay Bailey No 401) See plot plan for specific vent locations

D Surface Concrete Mats The mats over the tanks shall be a minimum of 9 inches thick and shall extend a minimum of 2 feet beyond the outside edge of the tank in all directions All concrete will be poured at a 3 inch slump Reinforcing shall be No 4 reinforcing bar 12 inch OCEW supported a minimum of 3 inches from the bottom of the pour Around the manholes the rebar will be No 5 8 in OCEW extending 4 feet from the center of the manhole The reinforcing bar shall be arranged to thoroughly support manhole and fill box openings in the concrete work The mix will have no additives and shall have a minimum compressive strength of 4 000 PSI at 28 days with air entrainment. Air entrainment admixture shall conform to ASTM C 260 and shall yield an air content not more than 8 percent nor less than 4 percent by volume The mat shall be given a broom finish The corners of the concrete work will be chamfered as indicated on the Drawings The top edges of the concrete work shall be rounded to a 3/4 inch bullnose The concrete mat will be sealed with an antispalling compound Saw cut all ditches to a minimum depth of 1 in and repour new concrete to a depth of 9 in Reinforce with 6x6x6 wire mesh

Versar INC

NOTES FOR UNDERGROUND STORAGE TANK INSTALLATION

E Bituminous Paving In areas where a tank mat or piping ditches extend into blacktop areas a 4-inch layer of cement will be raked in and topped with 2 inches of finish asphalt In all other areas where the blacktop is disturbed it shall be saw cut and then repaved with 2 inch base asphalt and 2 inches of topping All joints shall be sealed with a pourable tar sealer

F Backfill Material The tank shall be backfilled with clean washed 1/8 inch to 3/4-inch PEA gravel In the event that the PEA gravel is not available washed gravel crushings 1/8 inch to 1/2 inch may be used only after obtaining written approval from the Government s representative Gravel crushings shall not be used to backfill around fiberglass pipe Only rounded aggregate shall be used for this purpose Use of native soil for backfilling around new installations is prohibited

H Testing The Government s designated representative shall be notified by the Contractor at least 48 hours in advance of all testing All initial testing and any retesting specified in Items 1 3 4 and 5 below shall be conducted by the Contractor

1 A pre installation air test shall be performed on the diesel storage tank per the manufacturers recommendations Remove manway cover of fiberglass tank and inspect interior and exterior for discoloration caused by special dye in brine If no leaks are found install manway cover pressurize tank to 5 PSIG air soap all penetrations and fittings and inspect for bubbles per O/C recommendations

2 A pre installation air test shall be performed on the waste oil storage tank Pressurize tank to 5 PSIG, soap all primary tank penetrations and fittings Then pressurize the tanks interstitial space at 3 PSI by transfer of air from the primary chamber Soap all joints as per manufacturer's recommendations

3 After initial backfilling of the tank holes with PEA gravel (to top of tanks) the tanks shall be filled two thirds full with water

4 Upon completion of the primary piping system the product lines shall be isolated from the tank pumps and all other nonpressure rated equipment and shall be pressure tested at 75 PSI The test shall be conducted for a minimum of 30 minutes on each pipe run and all fittings and joints shall be soap tested All fittings shall remain exposed until the high pressure tests have been completed Upon completion of the high pressure test of the product lines the secondary containment piping shall be assembled and tested at 5 PSI for a minimum of 30 minutes All pipe joints shall be sound and tight at the test conditions The use of exterior patching foam additional packing or other secondary leak remediation methods shall not be allowed without prior approval of the engineer

5 A post installation air test (at 5 PSI) shall be conducted on the tanks when all piping and equipment installation is complete and before the tank is backfilled to subgrade This test shall be conducted when all piping fittings and equipment are installed and hooked up to the tanks This test shall not be considered valid unless the installation is complete with the exception of the Red Jacket inventory probe The Veeder Root inventory probe shall not be installed until the tanks have been purged of water The piping and connections shall be installed on the tank and tested as part of the after installation air test The pressure shall be maintained for a minimum of 30 minutes and all connections will be soaped

During the process of final air testing of the completed system a hydrostatic test of the turbine enclosure/sump shall be conducted The turbine enclosure/sump shall be filled with sufficient water to cover all penetrations and piping therein with a minimum of three (3) inches of water The tank shall be pressurized for a minimum of 30 minutes while the turbine enclosure/sump is full of water Inspect the gaskets bolts, penetrations piping connection etc for signs of leakage Any leakage shall be repaired in an approved manner After the final air test tanks shall be totally filled with water in preparation for the precision tests

6 After the installations are completed a precision test will be conducted on both tanks by a certified testing concern selected by the Government and at the Government s expense The containment piping will be retested by the contractor at 5 PSI to recheck the integrity of the system

7 In the event of any test failure repairs and all subsequent testing will be at the Contractor s expense Tanks will be certified by the Government s appointed testing concern as having met the acceptable standards of the industry before job acceptance or final payment will be made Upon successful completion of the precision tests, the Contractor shall remove all water from the tanks

I Pipe and Fittings

1 Black Steel Pipe and Fitting All pipe shall be Schedule 40 ASTM A 53 Fittings shall be minimum 150 pound malleable iron Unions shall be minimum No 250, and all couplings shall be banded malleable type All exposed surfaces of underground metal piping shall be taped and coated as per the manufacturer s recommendations with "Temflex corrosion protection tape (No 1200) and "Scotchrap pipe primer (No 34548) as manufactured by 3M Corporation or approved equal Threaded joints must be reamed and made up with nonhardening joint compound insoluble in petroleum products Approved joint compounds are Rectorseal Gilbarco pipe joint compound Permatex 57, or approved equal No Teflon tape hardening joint compounds or expansion compounds shall be used

NOTES FOR UNDERGROUND STORAGE TANK INSTALLATION

2 Fiberglass Pipe and Fittings All pipe and fittings shall be listed with UL file MH 15596 for nonmetallic underground piping for petroleum products alcohols and alcohol gasoline mixtures Pipe fittings and bonding agents shall be from the same manufacturer Piping products from either Ameron or A O Smith are acceptable

J Reinforcing Steel Deformed steel bars shall meet the requirements of ASTM A 615 Grade 40

K Suction Line The suction stub of the diesel tank will be fabricated of Schedule 40 black steel pipe and will extend into the tank 4 inches off the bottom An angle check (OPW 32H) will be installed in the line at the top of the tank The line will be double wall FRP (2 in inside of 3 in) from the turbine enclosure to the pumping unit with termination fittings installed at both ends as shown The 3/4-inch NPT fitting inside the turbine enclosure will be left open after final testing for line leak detection purposes

L Monitoring System and Gauge All equipment shall be provided by the Contractor Interstitial leak detection using Red Jacket sensors will be provided for both tanks (RE400 109 5 for diesel and RE400 180 5 for waste oil) The brine solution for the diesel tank shall be as marketed by Owens Corning and rated for service at 40 F Both tanks shall employ use of the liquid sump sensor (RE400 69 5) The Leak Detection Control Panel shall be the Red Jacket RLM 5001 Product inventory for the diesel tank shall be monitored using the Red Jacket inventory probe (Part No 400098 5) and a Hersey Gauge (Junior Mode) shall be used for the waste oil

The placement of the Red Jacket control panel shall be as shown on the drawings The diesel low level alarm shall be set at 40 percent of the tank capacity The high level alarm shall be set at 95 percent of tank capacity In all cases the Contractor shall install the Inventory Control and Leak Detection Systems in accordance with the manufacturer s instructions

M General

1 Copies of the Contractor s manufacturers certifications to install tanks and any applicable state registrations shall be submitted prior to start of work The Contractor shall submit to Versar for approval 4 copies of submittal documentation and/or shop drawings as required to include the following

a The Owens Corning double wall tank short form specification
b The Modern Welding Double Wall Glasteel Tank specification
c Inventory control data (i e Red Jacket digital probe data and Hersey Gauge Literature)
d Control panel (Red Jacket RLM 5001)
e Sensors (interstitial and turbine enclosure)
f Manholes and fill boxes
g Fiberglass pipe and fittings

Versar INC

NOTES FOR UNDERGROUND STORAGE TANK INSTALLATION

h Valves
i Hose retriever
j Pump and related equipment

2 Two copies of a piping as built drawing shall be submitted to the Government s designated representative after all piping is complete and before backfilling is accomplished for review and approval

3 It is the responsibility of the Contractor to ensure that tanks do not float by constructing berms filling tanks with water installing temporary sumps etc as required

4 All changes shall be approved in advance and in writing by the Government

5 A minimum of 1 year s warranty shall be extended by the Contractor on all workmanship materials and equipment

6 Because tank warranties are dependent upon the qualifications of the installer only contractors certified by O/C Tanks Corporation are approved for bidding on these projects

7 All work shall be performed in accordance with all applicable local state, and federal regulations OSHA requirements client requirements job specifications and manufacturers recommendations

ABBREVIATIONS

PSI	Pounds per square inch
OCEW	On center each way
ASTM	American Society Testing Materials
UL	Underwriter s Laboratories
FRP	Fiberglass reinforced plastic
AFG	Above finished grade
BFG	Below finished grade
O/C	Owens Corning Tanks Corporation

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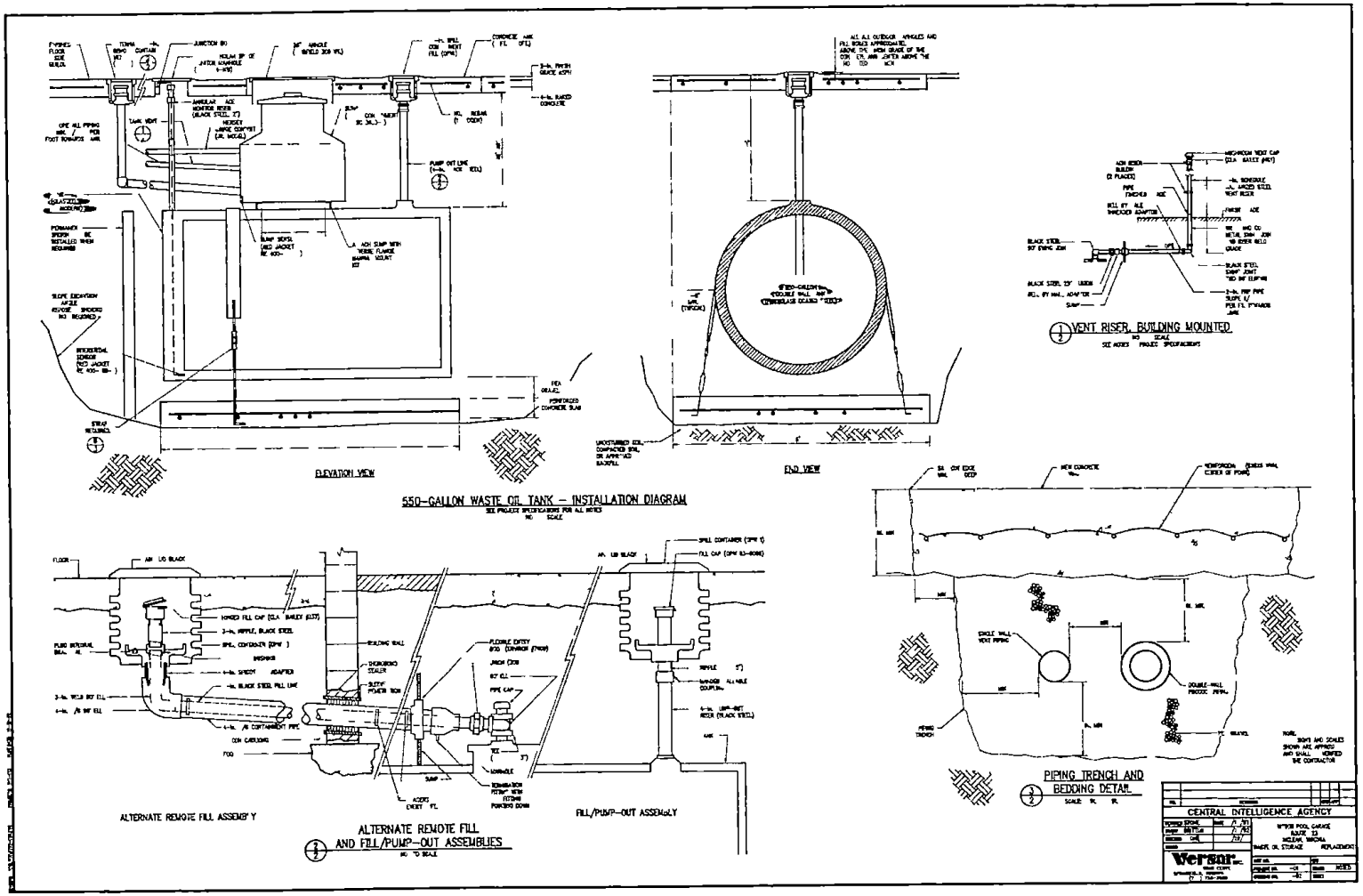

ELEVATION VIEW
END VIEW
550-GALLON WASTE OIL TANK – INSTALLATION DIAGRAM
VENT RISER, BUILDING MOUNTED
PIPING TRENCH AND BEDDING DETAIL
ALTERNATE REMOTE FILL ASSEMBLY
FILL/PUMP-OUT ASSEMBLY
ALTERNATE REMOTE FILL AND FILL/PUMP-OUT ASSEMBLIES
CENTRAL INTELLIGENCE AGENCY

UST #12 Used Oil

GLASTEEL DOUBLE WALL

Secondary Containment at its BEST

Double your feeling of security with a Glasteel Double Wall Tank We know that protecting the environment is and will continue to be one of the hottest topics our industry faces during the coming decades That's why Modern Welding's GLASTEEL DOUBLE WALL is the very finest secondary containment tank available in the market today

GLASTEEL tanks are built to EPA requirements Underwriters Laboratories standards 58 & 1746 and the Steel Tank Institute sfACT 100 specifications Tanks may be purchased with openings located along the top centerline of tank or fittings may be grouped for containment within sump collar assemblies choose the configuration right for your installation

Compatibility

GLASTEEL DOUBLE WALL primary UL steel tank is available with internal linings for the broadest compat ibility available with all fuels including gasoline jet fuel diesel fuel ethanol neat methanol M 85 and E 85

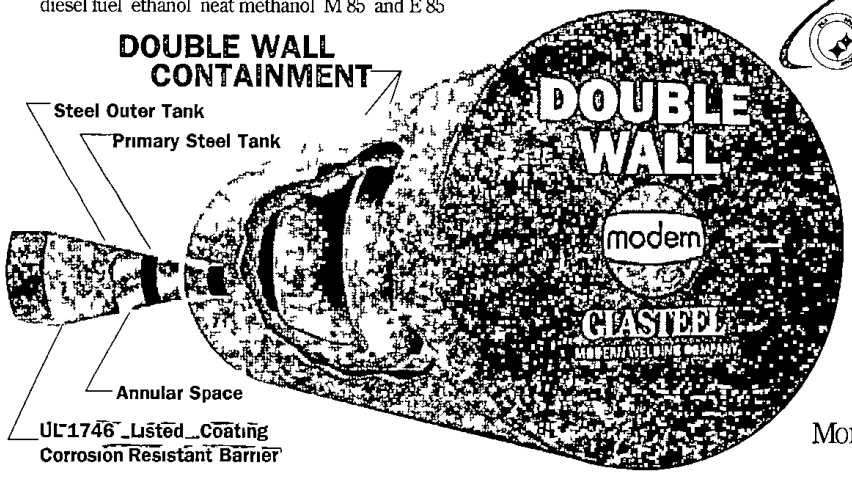
Superior Performance, Easy Installation

- Cathodic protection, dielectric isolation not required
- GLASTEEL DOUBLE WALL tanks come with Modern Welding's limited warranty
- Simple installation procedures, special backfill not required to maintain structural integrity

Ethanol Fuels

The Steel Tank Institute has researched compatibility issues concerning the storage of ethanol based fuels Shop fabricated Steel underground and aboveground storage tanks when used for the storage of ethanol based fuels has exhibited no long term detrimental structural or permeation issues As with all fuels STI recommends that tank owners implement a maintenance program for all tanks and associated equipment, including monitoring and removing water that may accumulate within the tank system

STI Steel Tank Institute



modern®

MODERN WELDING CO INC

Modern Welding Quality and Leadership

Phone (270) 685-4400 • Fax (270) 684 6972

1 800 922 1932

UST #13
overflow tank
diesel #2

Tri County Industries

(301) 937 8611
1 800 336 8611
Fax # 937-9028
FID 52-1340142

5005 Powder Mill Road
P O Box 1467
Beltsville, MD 20704 1467

Underground Storage Tank Replacement
MotorPool Garage
Langley Compound, Virginia
Contract # WA92193TCI

EQUIPMENT SPECIFICATION SUBMITTALS

560 gallon Type I double wall steel UL-58 fiberglass clad Modern Welding ~~Glasteel~~ underground storage tank with reverse flange manway

CONTRACTOR
TRI COUNTY INDUSTRIES, INC

✓ Approved

___ Approved with corrections as noted on submittal data and/or attached sheet(s)

Signature Saul Bissy
Title Pro. Mgr
Date 7-23-93

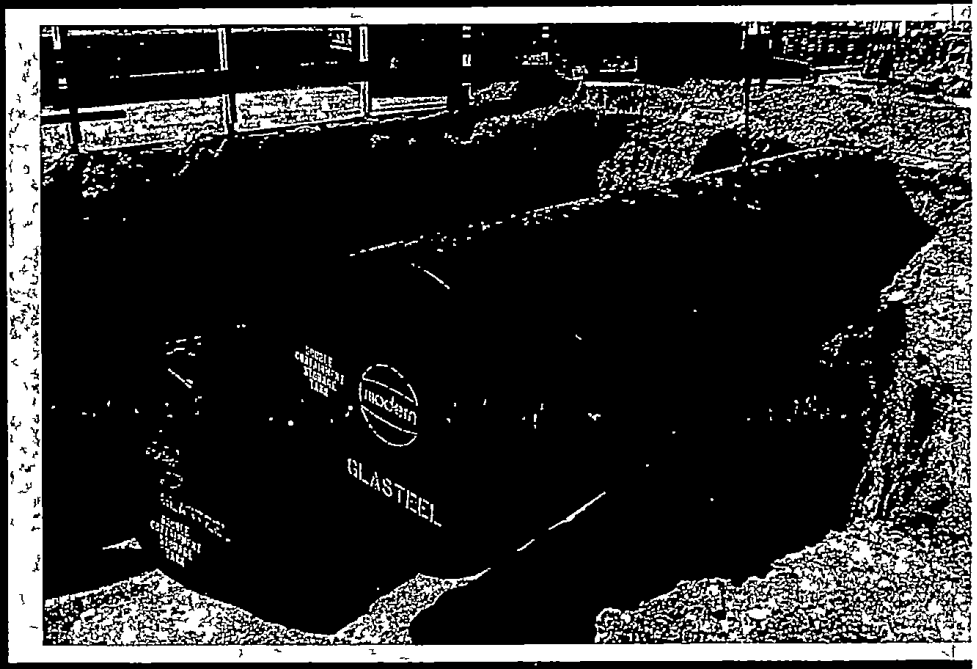
* PLEASE FURNISH UL TYPE II DOUBLE WALL STEEL UL-58 FIBERGLASS CLAD UST.

ENGINEERING
DOCUMENT REVIEW

Check only one item
☐ REVISE & RESUBMIT
☐ RESOLVE COMMENTS & PROCEED
☐ PROCEED
☐ ACCEPTED

ENGINEER ________ DATE ________

DOUBLE WALL UNDERGROUND BULK STORAGE TANKS



FOR FLAMMABLE LIQUIDS OR HAZARDOUS MATERIALS

(Tanks comply with EPA 280.20 and ACT-100)

modern

MODERN
WELDING
CO., INC.

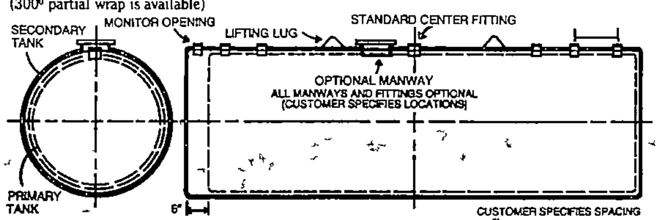
MODERN WELDING
UNDERGROUND DOUBLE WALL TANKS

- Bulk storage of flammable and combustible liquids
- Bulk storage of hazardous and toxic materials up to specific gravity of 1 1 (Tanks can be modified to store heavier liquids)
- Built to Underwriter Laboratory UL-58 and UL-142 requirements
- Meet requirements of NFPA 30 and 31 Uniform Fire codes and EPA 280 20
- Built of carbon steel stainless steel or a combination of both
- Available with internal linings for jet fuel acids alkalines and many other products
- Available in Modern s Glasteel fiberglass cladding (composite) coating (complies with ACT 100) or sti P_3 cathodic corrosion protection system
- 30 year limited warranty

TECHNICAL DATA. Surface load per axle (h 20) 32 000 lbs Pressure atmospheric AIR TESTING Air test at not less than 5 psi nor more than 7 psi Primary tank to be pressure tested with pressure in primary tank At no time shall pressure in secondary tank exceed pressure in primary tank

TYPE I CONSTRUCTION

UL TYPE I 360° Containment
(300° partial wrap is available)



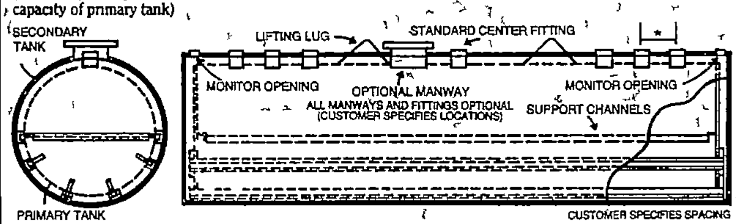
GALLON CAPACITY	APPROXIMATE AN DIA.	OVERALL LENGTH	WEIGHT
550	48"	6'6"	1 100 lb.
,000	64	6'6"	2, 50 lb.
2,000	64	2'6"	3,500 lb.
3,000	64	-4"	4,930 lb.
4,000	96"	6"	5,600 lb.
4,000	64"	24'	6,020 lb.
5,000	96"		6,900 lb.
6,000	96"	-4"	8,700 lb.
8,000	96"	22'6"	00 lb.
0,000	96"	27'6"	4,900 lb.
2,000	96"	32'6"	00 lb.
20,000	[illegible]	-6"	20,500 lb.

- Other izes availabl
- All siz may not be vailable at all plants (some parts of the country have different standards for dimensions)
- Lengths may vary according to UL standards
- All openings are finished 4 NPT (except 2" monitor opening), with 5" 4" nylon bushings (which som parts of the ountry m y not require)

NOTE: 520 nd 1 000 gallon hav openings in primary tank

TYPE II CONSTRUCTION

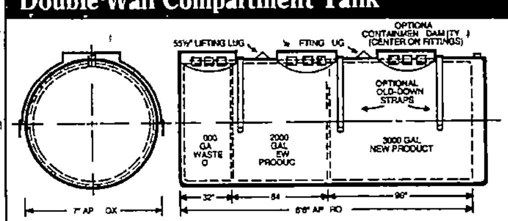
UL Type II 360° Containment
(Secondary tank provides 110% capacity of primary tank)



GALLON CAPACITY	PRIMARY ANK DIA.	LENGTH	SECONDARY ANK DIA.	LENGTH	WEIGHT
550	46"	[illegible]	60"		400 lb.
,000	64"		68"		2,425 lb.
2,000	64		68"		4,505 lb.
3,000	64"		68"		6,835 lb.
,000	64"		68"	25'	6,21 lb.
6,000	96"	4'	00"		50 lb.
8,000	96"		00"		2,960 lb.
,000	96"	22'	00"	22'	5,925 lb.
0,000	96"	27'	00"	28'	9, 00 lb.
2,000	96"	32'	00"	33'	21,900 lb.
20,000	26"		130"	32'	35,850 lb.

Othe sizes vailabl
All size may not be available all plants (som parts of the country ha differ nt standard for dimensions)
Lengths may vary ccording to UL standard
All opening ar fi ished NPT (cept 2" monitor pening) with 5 4 nylon bushing (which some parts of th country may no equire)
NOTE 520 nd 000 g llo have ope ngs in primary tan

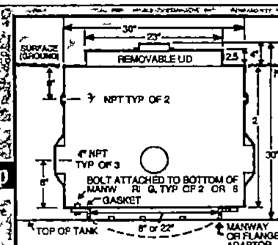
Double Wall Compartment Tank



NOTE. Shown is a typical 6 000 gall n compartmented tank (11 200 lbs) with opti nal 31 I.D 37 I D co talnment dams (3) Also shown with optional 180° hold-down straps (2 6 3) Type I or Type II Constructio Follow air test instructions above.

Standard PS-30 Piping Sump

Modern Weld ng Pip ng Sumps can be f tt d t all Doubl Wall Tanks F more detailed information refer to Modern Weldi g's P p g Sump broch re (Also available n 16 22 36 and 42")



REGIONAL SHIPMENTS REDUCE SHIPPING COSTS!

Contact Modern Welding s plant nearest you for price and delivery

MODERN WELDING CO INC.

Augusta Georgia 30901
300 Prep Phillips Drive
Phone (404)722 3411

Burlington Iowa 52601
2818 Mt Pleasant Rd
Phone (319)754 6577

Fresno California 93722
4141 N Brawley Ave
Phone (209)275 9353

Newark Ohio 43055
72 Waldo St
Phone (614)344 9425

Orlando Florida 32806
1801 Atlanta Ave
Phone (407)843 1270

Houston Texas 77020
715 Sakowitz St
Phone (713)675 4211

Owensboro Kentucky 42303
1450 E Parrish Ave
Phone (502)683 5323

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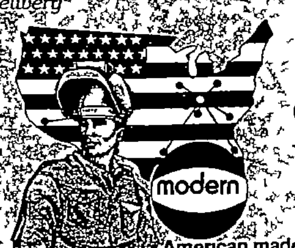
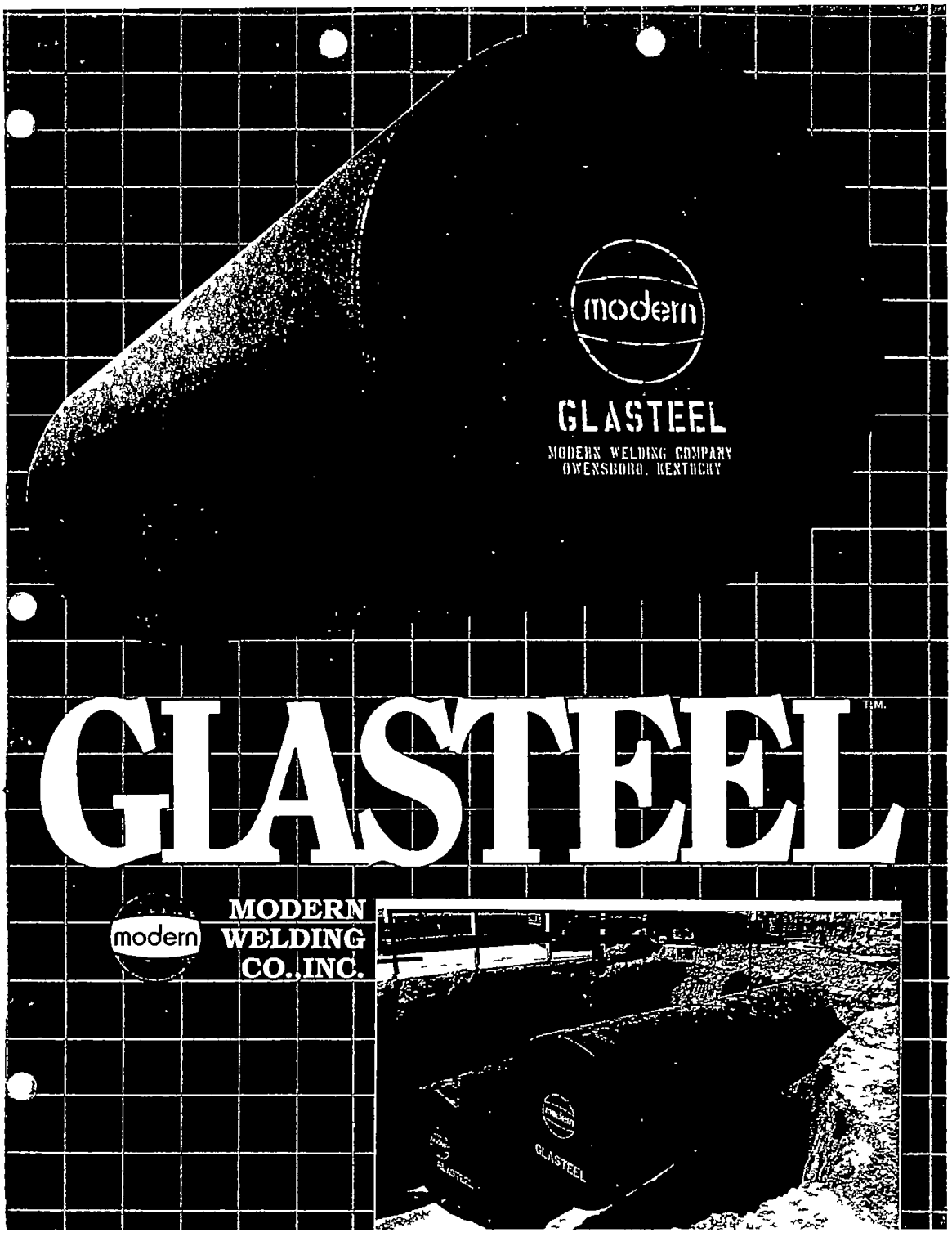
ACT-100





GLASTEEL™

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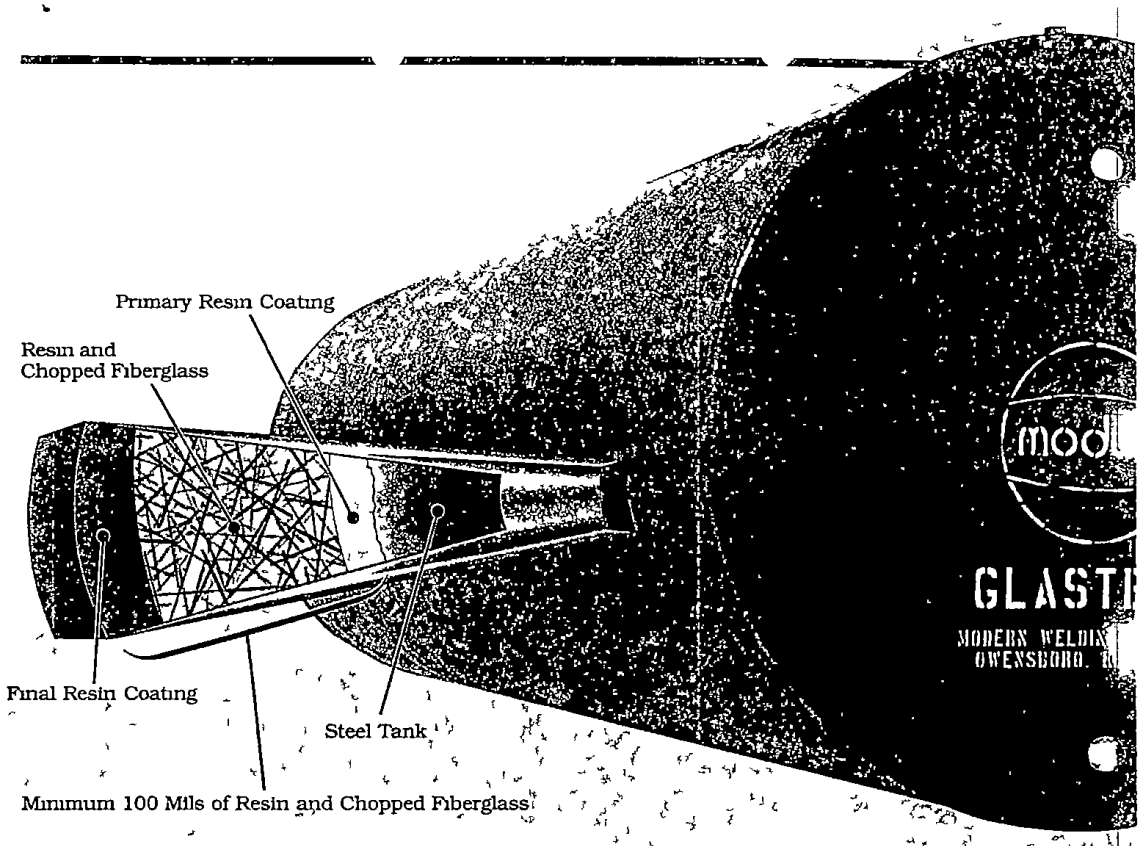
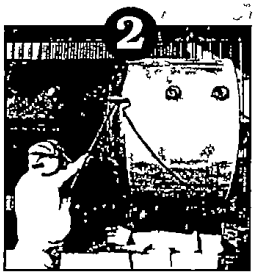
MODERN WELDING CO., INC.



6 STEPS TO THE TRIPLE PROTECTION OF STEEL, FIBERGLASS AND RESIN.

SANDBLASTING
The exterior surface of the tank is first sandblasted to a near white SSP6 finish to give the resin coating a firm grip when applied. Tank openings are then fitted with 5 X 4 dielectric bushings



BONDING
A primary resin coating is applied to seal the tank surface and to act as an adhesive base for the resin and fiberglass cladding which is applied in step #3

CLADDING
A minimum of 100 mils of chopped fiberglass and isoph thalic resin is evenly applied to form a virtually indestructible dielectric cladding

COMPRESSING THE FIBER GLASS
Using special slotted rollers all air bubbles are removed, and all loose fiberglass strands are packed tightly to insure a smooth and effective cladding A final coat of resin is then applied for added protection.

THE ULTIMATE BARRIER AGAINST THE ELEMENTS

NO MONITORING REQUIRED

AVAILABLE IN SINGLE OR DOUBLE WALL

MAINTENANCE FREE

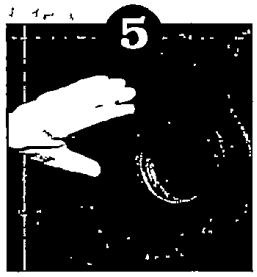
GLASTEEL' It begins with a tank made of high grade all-welded steel which in itself can handle everything from gasoline jet and diesel fuels to the new petroleum products and additives The difference is a six step process which makes Glasteel tanks virtually indestructible

The Glasteel process completely clads the original steel tank in an armor made of iso phthalic resin and chopped fiberglass After the process is complete the Glasteel tank is totally isolated electrically and is compatible with all fuels There is no need for soil resis tivity testing or expensive cathodic protection systems because even highly corrosive soil will not affect the Glasteel tank Striker plates on the bottom of the tank are directly beneath all openings This allows any opening to be used for any purpose thus eliminating possibilities of internal corrosion in the bottom of the tank

Your Glasteel tank when completed will be delivered to you on time by Modern s own fleet of trucks Regional delivery could also save on freight charges

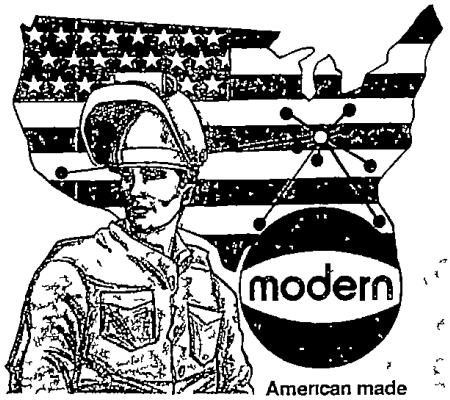
Glasteel tanks are as easy to install as any ordinary steel tank and every tank carries Modern s thirty year limited warranty Modern Glasteel tanks meet EPA requirements and are made in accordance with Underwriter s Listed specifications (Laboratories Std #58) They also meet or exceed codes for the storage of hazardous materials (NFPA #30 and #31) the Uniform Fire Code and American National Standards Inst B137 1 1971

From 550 to 50 000 gallons single or double wall Modern can construct a maintenance-free Glasteel tank for you For more product information or for engineering or technical services call the Modern office nearest you



OPENING THE HOLES
The distinctive red Glasteel cladding provides a positive and permanent seal, protecting and electrically isolating the entire tank. The holes in the dielectric bushings are then opened to permit piping to be connected without disturbing the electrical isolation.

HOLIDAY TEST
After the cladding and final resin coating have cured to a rock hard finish, each tank undergoes a holiday test of 35 000 volts (or according to local or military codes) This test is performed over 100% of the tank s surface This holiday test makes sure there are no pinholes or hairline cracks before the tanks are sent out on the job



American made

INSTALLATION INSTRUCTIONS

Modern Glasteel Underground Storage Tanks

1. Tanks installed in areas that will be subjected to vehicular traffic shall be protected to either 18 of compacted soil plus 6 of reinforced concrete or 8 of asphalt paving extending at least one foot from the tank in all directions or by a minimum of 3 feet of soil

2. The excavation of underground tanks that will not be subjected to vehicular traffic shall be done to provide a minimum cover of 2 feet of soil or one foot of soil under a reinforced concrete pad of not less than 4 thick

3. The foundation for the tanks should be suitably graded level and have 6 of clean sand or 6 of pea gravel The tanks shall be encompassed by clean sand pea gravel or compacted soil free from stones and other foreign matter

4. If air test is required at job site pressure should not exceed 5 PSIG Special care must be taken not to over tighten or cross thread test plugs

5. The backfill material must be capable of being 95% compacted (Cradles saddles or chocking blocks should not be used as they may cause tank failure due to stress concentrations)

6. Remove all thread or flange protectors from the unused openings Then close off these openings with steel pipe plugs or gaskets using proper jointing seal (Clemmer s or equal) Install lifting lug covers according to directions on the tank using covers supplied with tank

7. In the event a tank may float or become buoyant due to flooding or a rise in the water table anchor precautions such as holddown straps should be considered Check with local authorities concerning regulations in your area Refer to NFPA Pamphlet #30 for further information

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GLASTEEL LIMITED WARRANTY

Modern Welding Co Inc

We warrant that our Glasteel tanks if installed underground with proper backfill and otherwise installed in accordance with our installation instructions

A Will meet our published specifications and will be free from defects material and workmanship for a period of one (1) year following date of original delivery by us

B Will not fail for a period of thirty (30) years from date of original purchase due to external corrosion cracking break up or collapse resulting in tank failure

C Will not fail for a period of thirty (30) years from date of original purchase due to internal corrosion provided the tank is used solely for gasoline gasohol jet fuel diesel fuel or methanol at ambient underground temperatures or used for fuel oil at temperatures not to exceed 150°F

Our liability under this warranty shall be limited to the original owner with the tank at the original installation location only and at our option (1) repair of the defective tank (2) delivery of a replacement tank to the point of original delivery or (3) refund of the original purchase price and we shall not be liable for failure of piping system connected with the tank nor shall we be liable for any labor or installation cost indirect or consequential damages in connection with such tanks The foregoing constitutes our exclusive obligation and we make no express or implied warranties or any warranty or merchantability or fitness for any particular purpose whatsoever except as stated above

Refer to Spec Data® for complete details

REGIONAL SHIPMENTS REDUCE SHIPPING COSTS!

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MODERN WELDING CO INC

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Augusta Georgia 30901
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Fresno California 93722
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Phone (209)275 9353

Houston Texas 77020
715 Sakowitz St
Phone (713)675 4211

Newark Ohio 43055
72 Waldo St
Phone (614)344 9425

Orlando Florida 32806
1801 Atlanta Ave
Phone (407)843 1270

Owensboro Kentucky 42301
1500 E 12th St
Phone (502)683 5323

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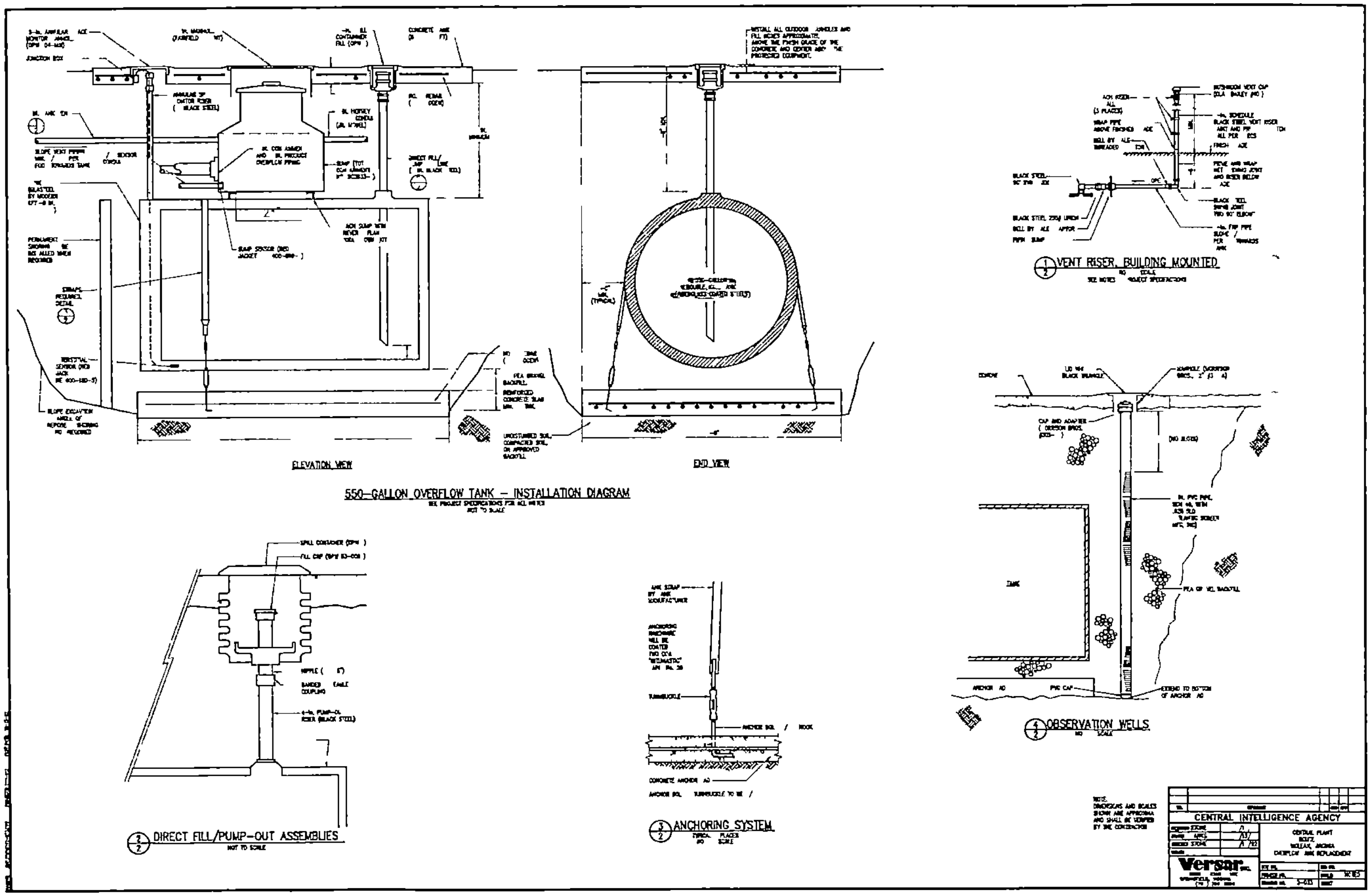
UST #15


ELEVATION VIEW
END VIEW
550-GALLON OVERFLOW TANK – INSTALLATION DIAGRAM
VENT RISER, BUILDING MOUNTED
OBSERVATION WELLS
DIRECT FILL/PUMP-OUT ASSEMBLIES
NOT TO SCALE
ANCHORING SYSTEM
CENTRAL INTELLIGENCE AGENCY
Versar